

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 07/30/2014 : Version:

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture

Trade name : MASTER BRAKE CLEANER NON-CHLORINATED 14 OZ.

Product code : BCN20

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Brake Parts Cleaner

#### 1.3. Details of the supplier of the safety data sheet

Master Chemical 4635 Willow Drive Medina, MN 55340 - USA T: 612-478-2360

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300

#### **SECTION 2: Hazards identification**

#### 2.1. Classification of the substance or mixture

#### Classification (GHS-US)

Flam. Aerosol 2 H223 Compressed gas H280 Acute Tox. 3 (Oral) H301 Acute Tox. 3 (Dermal) H311 Skin Irrit. 2 H315 Repr. 2 H361 STOT SE 1 H370 STOT SE 3 H336 STOT RE 2 H373

Full text of H-phrases: see section 16

#### 2.2. Label elements

#### **GHS-US** labeling

Hazard pictograms (GHS-US)



 $\Diamond$ 

GHS04







Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H223 - Flammable aerosol

H280 - Contains gas under pressure; may explode if heated H301+H311 - Toxic if swallowed or in contact with skin

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

H361 - Suspected of damaging fertility or the unborn child

H370 - Causes damage to organs

H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P201 - Obtain special instructions

P202 - Do not handle until all safety precautions have been read and understood P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking

P211 - Do not spray on an open flame or other ignition source P251 - Pressurized container: Do not pierce or burn, even after use

P260 - Do not breathe dust,fumes,gas,mist,vapor spray P261 - Avoid breathing dust,fume.gas,mist,vapor spray P264 - Wash affected areas thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves, protective clothing, eye protection, face protection P301+P310 - If swallowed: Immediately call a poison control center, doctor, physician,

P302+P352 - If on skin: Wash with plenty of soap and water

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P307+P311 - If exposed: Call a poison center/doctor

P308+P313 - If exposed or concerned: Get medical advice/attention

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P312 - Call a POISON CONTROL CENTER, doctor, if you feel unwell.

P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment: See section 4.1 on this label

P330 - Rinse mouth

P332+P313 - If skin irritation occurs: Get medical advice/attention

P361 - Take off immediately all contaminated clothing

P362 - Take off contaminated clothing and wash before reuse

P363 - Wash contaminated clothing before reuse

P403+P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

P410+P403 - Protect from sunlight. Store in a well-ventilated place

P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

#### Other hazards

Other hazards not contributing to the classification

: Contains gas under pressure; may explode if heated.

#### **Unknown acute toxicity (GHS-US)**

No data available

#### **SECTION 3: Composition/information on ingredients**

#### **Substance**

Not applicable

#### 3.2. **Mixture**

Name	Product identifier	%	Classification (GHS-US)
Toluene	(CAS No) 108-88-3	30 - 50	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361 STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304
Methanol	(CAS No) 67-56-1	30 - 50	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:dust,mist), H331 STOT SE 1, H370
Acetone	(CAS No) 67-64-1	10 - 30	Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336
carbon dioxide, liquefied, under pressure	(CAS No) 124-38-9	5 - 10	Compressed gas, H280

## **SECTION 4: First aid measures**

## **Description of first aid measures**

First-aid measures general

- : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. Call a POISON CENTER or doctor/physician.
- Cough. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a

POISON CENTER/doctor/physician if you feel unwell.

First-aid measures after skin contact

First-aid measures after inhalation

Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. Obtain medical attention if pain, blinking or redness persist. Direct contact with the eyes is likely to be irritating.

First-aid measures after ingestion

Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Immediately call a POISON CENTER or doctor/physician.

## Most important symptoms and effects, both acute and delayed

Symptoms/injuries

: Suspected of damaging fertility or the unborn child. Causes damage to organs.

Symptoms/injuries after inhalation

Shortness of breath. May cause drowsiness or dizziness.

Symptoms/injuries after skin contact

Repeated exposure to this material can result in absorption through skin causing significant

health hazard. Toxic in contact with skin. Causes skin irritation.

Symptoms/injuries after ingestion

Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

#### Indication of any immediate medical attention and special treatment needed

No additional information available

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#### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable aerosol.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns

and injuries.

#### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire-fighting water from entering environment. DO NOT fight fire when fire

reaches explosives. Evacuate area.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Aerosol Level 2.

#### **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : No naked lights. No smoking. Isolate from fire, if possible, without unnecessary risk. Remove

ignition sources. Use special care to avoid static electric charges.

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust,fume,gas,mist,vapor spray.

Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill.

Methods for cleaning up : Store away from other materials.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

#### **SECTION 7: Handling and storage**

#### 7.1. Precautions for safe handling

Additional hazards when processed : Hazardous waste due to potential risk of explosion. Pressurized container: Do not pierce or burn,

even after use.

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or

smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not spray on an open flame or other ignition source. Obtain special instructions. Do not handle until all safety precautions have been read and understood. Avoid breathing dust,fume,gas,mist,vapor spray. Use only outdoors or in a well-ventilated area. Do not breathe

dust,fumes,gas,mist,vapor spray.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after

handling.

## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Do not expose to

temperatures exceeding 50 °C/122 °F. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Storage area : Store in a well-ventilated place.

#### 7.3. Specific end use(s)

Follow Label Directions.

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

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benzene (71-43-2)		
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA ACGIH	ACGIH STEL (ppm)	5 ppm
USA ACGIH	ACGIH Ceiling (ppm)	25 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm

Toluene (108-88-3)		
USA ACGIH	ACGIH TWA (mg/m³)	37 mg/m³
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (mg/m³)	560
USA ACGIH	ACGIH STEL (ppm)	150 ppm
USA ACGIH	ACGIH Ceiling (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm

carbon dioxide, liquefied, under pressure (124-38-9)		
USA ACGIH	ACGIH TWA (mg/m³)	9000 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (ppm)	5000 ppm
USA ACGIH	ACGIH STEL (mg/m³)	54000
USA ACGIH	ACGIH STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	9000 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm

acetone (67-64-1)		
USA ACGIH ACGIH TWA (ppm) 500 ppm		
USA ACGIH ACGIH STEL (ppm) 500 ppm		

Acetone (67-64-1)		
USA ACGIH	ACGIH TWA (mg/m³)	1200 mg/m³
USA ACGIH	ACGIH TWA (ppm)	500 ppm
USA ACGIH	ACGIH STEL (mg/m³)	1780 mg/m³
USA ACGIH	ACGIH STEL (ppm)	750 ppm
USA ACGIH	ACGIH Ceiling (mg/m³)	0 mg/m <sup>3</sup>
USA ACGIH	ACGIH Ceiling (ppm)	3000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	2400 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm

Methanol (67-56-1)		
USA ACGIH	ACGIH TWA (mg/m³)	260 mg/m³
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (mg/m³)	325 mg/m³
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA ACGIH	ACGIH Ceiling (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	260 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm

## **Exposure controls**

Appropriate engineering controls

: Local exhaust venilation, vent hoods.

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Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.





Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is

recommended.

Other information : Do not eat, drink or smoke during use.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Colorless to pale yellow liquid.
Color : Colourless to light yellow.

Odor : Mild.

Odor threshold : No data available pH : No data available Relative evaporation rate (butyl acetate=1) : No data available

Melting point : <-78.9 °C (LOWEST COMPONENT)

Freezing point : No data available

Boiling point : 56 °C (LOWEST COMPONENT)

Flash point : -29 °C Closed cup

Auto-ignition temperature : 385 °C (LOWEST COMPONENT)

Decomposition temperature : No data available Flammability (solid, gas) : No data available Vapor pressure : No data available Relative vapor density at 20 °C : No data available

Relative density : 0.82 Solubility : Wate

Solubility : Water: 64 %

Log Pow : No data available

Log Kow : No data available

Viscosity, kinematic : No data available

Viscosity, dynamic : No data available

Explosive properties : Heating may cause a fire or explosion.

Oxidizing properties : No data available Explosive limits : 2.5 - 12.8 vol %

9.2. Other information

VOC content : 70.1 %
Gas group : Liquefied gas

## **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Flammable aerosol. Contains gas under pressure; may explode if heated. Extreme risk of explosion by shock, friction, fire or other sources of ignition.

### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Open flame. Overheating.

## 10.5. Incompatible materials

Strong acids. Strong bases.

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#### 10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

## **SECTION 11: Toxicological information**

## 11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed. Toxic in contact with skin.

Acute toxicity	: Toxic if swallowed. Toxic in contact with skin.
benzene (71-43-2)	
LD50 oral rat	> 930 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; > 2000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 8240 mg/kg (Rabbit; Experimental value; 21 CFR 191.10; > 9.4; Rabbit)
LC50 inhalation rat (mg/l)	43.767 mg/l/4h (Rat; Experimental value)
LC50 inhalation rat (ppm)	13700 ppm/4h (Rat; Experimental value)
Toluene (108-88-3)	
LD50 oral rat	5580 mg/kg body weight
LD50 dermal rabbit	> 5000 mg/kg body weight LD50 quoted as 14.1 mL/kg (12267 mg/kg using density of 0.87)
LC50 inhalation rat (mg/l)	> 28.1 mg/l/4h (Rat; Air, Literature study)
acetone (67-64-1)	
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	30000 ppm/4h (Rat; Experimental value)
	Tooloo Pp. 10 (100) 20 points and 100 points and 10
Acetone (67-64-1)	5000 # (D + 5 + 1 + 1 + 050D +04 5 + 1 + 1 + 1
LD50 oral rat	5800 mg/kg (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	20000 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402)
LC50 inhalation rat (mg/l)	71 mg/l/4h (Rat; Experimental value; 76 mg/l/4h; Rat; Experimental value)
LC50 inhalation rat (ppm)	30000 ppm/4h (Rat; Experimental value)
Methanol (67-56-1)	
LD50 oral rat	>= 2528 mg/kg body weight application as 50% aqueous solution
LD50 dermal rabbit	17100 mg/kg corresponding to 20 ml/kg bw according to the authors
LC50 inhalation rat (mg/l)	128.2 mg/l/4h Air
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classifiedBased on available data, the classification criteria are not met
Carcinogenicity	: Not classified
benzene (71-43-2)	
IARC group	1
Toluene (108-88-3)	
IARC group	3
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Causes damage to organs. May cause drowsiness or dizziness.
Specific target organ toxicity (repeated exposure)	<ul> <li>May cause damage to organs through prolonged or repeated exposure. Based on available data the classification criteria are not met May cause damage to organs through prolonged or repeated exposure</li> </ul>
Aspiration hazard	: Not classifiedBased on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Toxic if swallowed. Toxic in contact with skin.
Symptoms/injuries after inhalation	: Shortness of breath. May cause drowsiness or dizziness.
Symptoms/injuries after skin contact	: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Toxic in contact with skin. Causes skin irritation.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

## **SECTION 12: Ecological information**

### 12.1. Toxicity

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benzene (71-43-2)

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Persistence and degradability

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

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benzene (71-43-2)		
LC50 fish 1	5.3 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)	
EC50 Daphnia 1	18 mg/l (24 h; Daphnia magna)	
EC50 other aquatic organisms 1	29 mg/l (72 h; Selenastrum capricornutum)	
LC50 fish 2	15.1 mg/l (96 h; Pimephales promelas)	
EC50 Daphnia 2	10 mg/l (48 h; Daphnia magna)	
TLM fish 1	22.5 mg/l (96 h; Lepomis macrochirus; Soft water)	
TLM fish 2	32 mg/l (96 h; Pimephales promelas; Hard water)	
TLM other aquatic organisms 1	10 - 100,96 h	
Threshold limit algae 2	50 mg/l (24 h; Phaeodactylum; Photosynthesis)	
Toluene (108-88-3)		
LC50 fish 1	24 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)	
EC50 Daphnia 1	84 mg/l (24 h; Daphnia magna; Locomotor effect)	
LC50 fish 2	13 mg/l (96 h; Lepomis macrochirus)	
EC50 Daphnia 2	11.5 - 19.6 mg/l (48 h; Daphnia magna)	
Threshold limit algae 1	> 400 mg/l (168 h; Scenedesmus quadricauda; Toxicity test)	
Threshold limit algae 2	105 mg/l (192 h; Microcystis aeruginosa)	
carbon dioxide, liquefied, under pressure (	124-38-9)	
LC50 fish 1	35 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)	
LC50 fish 2	60 - 240 mg/l (12 h; Salmo gairdneri (Oncorhynchus mykiss); Lethal)	
	or The might (12 m, damne gamanem (emocnificance mymose), Iomaay	
acetone (67-64-1) LC50 fish 1	6210 mg/l (06 h: Dimonhales promoles: Naminal concentration)	
	6210 mg/l (96 h; Pimephales promelas; Nominal concentration)	
EC50 Daphnia 1	8800 mg/l (48 h; Daphnia pulex)	
LC50 fish 2	5540 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)	
TLM fish 1	13000 ppm (96 h; Gambusia affinis; Turbulent water)	
TLM fish 2	> 1000 ppm (96 h; Pisces)	
Threshold limit other aquatic organisms 1  Threshold limit other aquatic organisms 2	3000 mg/l (Plankton)	
	28 mg/l (Protozoa)	
Threshold limit algae 1	7500 mg/l (Scenedesmus quadricauda; pH = 7)	
Threshold limit algae 2	3400 mg/l (48 h; Chlorella sp.)	
Acetone (67-64-1)		
LC50 fish 1	6210 mg/l (96 h; Pimephales promelas; Nominal concentration)	
EC50 Daphnia 1	8800 mg/l (48 h; Daphnia pulex)	
LC50 fish 2	5540 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)	
TLM fish 1	13000 ppm (96 h; Gambusia affinis; Turbulent water)	
TLM fish 2	> 1000 ppm (96 h; Pisces)	
Threshold limit other aquatic organisms 1	3000 mg/l (Plankton)	
Threshold limit other aquatic organisms 2	28 mg/l (Protozoa)	
Threshold limit algae 1	7500 mg/l (Scenedesmus quadricauda; pH = 7)	
Threshold limit algae 2	3400 mg/l (48 h; Chlorella sp.)	
Methanol (67-56-1)		
LC50 fish 1	15400 mg/l (96 h; Lepomis macrochirus; Lethal)	
EC50 Daphnia 1	> 10000 mg/l (48 h; Daphnia magna; Lethal)	
LC50 fish 2	10800 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)	
EC50 Daphnia 2	24500 mg/l (48 h; Daphnia magna)	
Threshold limit other aquatic organisms 1	6600 mg/l (16 h; Pseudomonas putida)	
Threshold limit algae 1	530 mg/l (192 h; Microcystis aeruginosa)	
Threshold limit algae 2	8000 mg/l (168 h; Scenedesmus quadricauda)	
2.2. Persistence and degradability		
MASTER BRAKE CLEANER NON-CHLORINATED 14 OZ.		
Persistence and degradability	Not established.	

ThOD 3.10 g O<sub>2</sub> /g substance

soil. Photolysis in the air.

2.18 g O<sub>2</sub> /g substance

2.15 g O<sub>2</sub> /g substance

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Biodegradable in water. Ozonation in water. Forming sediments in water. Biodegradable in the

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0.70 % ThOD

2.15 g O<sub>2</sub> /g substance

2.52 g O<sub>2</sub> /g substance

Readily biodegradable in water. Biodegradable in the soil. Low potential for adsorption in soil.

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benzene (71-43-2) BOD (% of ThOD)

Toluene (108-88-3)

Persistence and degradability

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

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Chemical oxygen demand (COD)	2.52 g O <sub>2</sub> /g substance
ThOD	3.13 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.69 % ThOD
carbon dioxide, liquefied, under pressur	e (124-38-9)
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under
. e.e.e.e.	anaerobic conditions. No (test)data on mobility of the substance available.
Biochemical oxygen demand (BOD)	1.43 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.92 g O <sub>2</sub> /g substance
ThOD	2.20 g O <sub>2</sub> /g substance
BOD (% of ThOD)	(20 day(s)) 0.872
Acetone (67-64-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under
	anaerobic conditions. No (test)data on mobility of the substance available. Not established.
Biochemical oxygen demand (BOD)	1.43 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.92 g O <sub>2</sub> /g substance
ThOD	2.20 g O <sub>2</sub> /g substance
BOD (% of ThOD)	(20 day(s)) 0.872
Methanol (67-56-1)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.6 - 1.12 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.42 g O <sub>2</sub> /g substance
ThOD	1.5 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.8 % ThOD
2.3. Bioaccumulative potential	
MASTER BRAKE CLEANER NON-CHLOR	
Bioaccumulative potential	Not established.
benzene (71-43-2)	
BCF fish 1	19 Salmo gairdneri (Oncorhynchus mykiss)
BCF other aquatic organisms 1	30 (24 h; Chlorella sp.; Fresh weight)
Log Pow	2.13 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
Toluene (108-88-3)	
BCF fish 1	13.2 (Anguilla japonica)
BCF fish 2	90 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	380 (24 h; Chlorella sp.; Fresh weight)
BCF other aquatic organisms 2	4.2 (Mytilus edulis; Fresh weight)
Log Pow	2.73 (Experimental value; Other; 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
carbon dioxide, liquefied, under pressur	e (124-38-0)
Log Pow	0.83 (Experimental value)
	Low potential for bioaccumulation (Log Kow < 4).
Bioaccumulative notential	25. potential for biodecamatation (Log Now > 7).
Bioaccumulative potential	
acetone (67-64-1)	
acetone (67-64-1) BCF fish 1	0.69 (Pisces)
acetone (67-64-1) BCF fish 1 BCF other aquatic organisms 1	3
acetone (67-64-1) BCF fish 1	

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acetone (67-64-1)	
Bioaccumulative potential	Not bioaccumulative.
Acetone (67-64-1)	
BCF fish 1	0.69 (Pisces)
BCF other aquatic organisms 1	3
Log Pow	-0.24 (Test data)
Bioaccumulative potential	Not bioaccumulative. Not established.
Methanol (67-56-1)	
BCF fish 1	< 10 (Leuciscus idus)
Log Pow	-0.77 (Experimental value; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
12.4 Mobility in soil	

benzene (71-43-2)	
Surface tension	0.029 N/m (20 °C)
Toluene (108-88-3)	
Surface tension	0.03 N/m (20 °C)
acetone (67-64-1)	
Surface tension	0.0237 N/m
Acetone (67-64-1)	
Surface tension	0.0237 N/m
Methanol (67-56-1)	
Surface tension	0.023 N/m (20 °C)

#### Other adverse effects 12.5.

Other information : Avoid release to the environment.

## **SECTION 13: Disposal considerations**

#### Waste treatment methods

: Dispose in a safe manner in accordance with local/national regulations. Container under Waste disposal recommendations

pressure. Do not drill or burn even after use. Dispose of contents/container to appropriate waste

disposal facility, in accordance with local, regional, national, international regulations. Additional information : Flammable vapors may accumulate in the container.

: Avoid release to the environment. Hazardous waste due to toxicity. Ecology - waste materials

## **SECTION 14: Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): UN1950, Aerosols, 2.1, Limited Quantity ICAO/IATA (air): UN1950, Aerosols, 2.1, Limited Quantity IMO/IMDG (water): UN1950, Aerosols, 2.1, Limited Quantity

Special Provisions: N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

#### 14.2. **UN** proper shipping name

DOT Proper Shipping Name : Aerosols

flammable, (each not exceeding 1 L capacity)

Department of Transportation (DOT) Hazard

Classes

: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

Hazard labels (DOT) : 2.1 - Flammable gas



DOT Special Provisions (49 CFR 172.102) : N82 - See 173.306 of this subchapter for classification criteria for flammable aerosols.

DOT Packaging Exceptions (49 CFR 173.xxx) : 306 DOT Packaging Non Bulk (49 CFR 173.xxx) : None DOT Packaging Bulk (49 CFR 173.xxx) : None

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#### 14.3. Additional information

Other information : No supplementary information available.

**Overland transport** 

Class (ADR) : 2 - Gases
Classification code (ADR) : 5TF

Danger labels (ADR) : 2.1 - Flammable gases

6.1 - Toxic substances



Tunnel restriction code (ADR) : D
Excepted quantities (ADR) : E0

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a

passenger vessel.

DOT Vessel Stowage Other : 48 - Stow "away from" sources of heat,87 - Stow "separated from" Class 1 (explosives) except

Division 14,126 - Segregation same as for Class 9, miscellaneous hazardous materials

Limited quantities (IMDG) : Aerosol can

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 75 kg

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 150 kg

CFR 175.75)

## **SECTION 15: Regulatory information**

## 15.1. US Federal regulations

MASTER BRAKE CLEANER NON-CHLORIN	IATED 14 OZ.
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
	Fire hazard
	Immediate (acute) health hazard
	Sudden release of pressure hazard

Toluene (108-88-3)	
Listed on United States SARA Section 313	
Listed on the United States TSCA (Toxic Substar	nces Control Act) inventory
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
	Fire hazard
	Immediate (acute) health hazard

Acetone (67-64-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Fire hazard Delayed (chronic) health hazard

Methanol (67-56-1)	
Listed on United States SARA Section 313 Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Fire hazard

#### 15.2. International regulations

#### **CANADA**

MASTER BRAKE CLEANER NON-CHLORINAT	TER BRAKE CLEANER NON-CHLORINATED 14 OZ.	
WHMIS Classification	Class B Division 5 - Flammable Aerosol Class D Division 2 Subdivision B - Toxic material causing other toxic effects	
Toluene (108-88-3)		
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision A - Very toxic material causing other toxic effects	

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Acetone (67-64-1)		
Listed on the Canadian DSL (Domestic Sustances List)		
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects	
Methanol (67-56-1)		
WHMIS Classification	Class B Division 2 - Flammable Liquid Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class D Division 2 Subdivision B - Toxic material causing other toxic effects	

### **EU-Regulations**

#### Toluene (108-88-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Acetone (67-64-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)- Directive 79/831/EEC, sixth Amendment of Directive 67/548/EEC (dangerous substances)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Repr.Cat.3; R63 F; R11

T; R23/24/25 T; R39/23/24/25

Xn, R48/20 Xi, R36/38

Full text of R-phrases: see section 16

## 15.2.2. National regulations

## Acetone (67-64-1)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on KECI (Korean Existing Chemicals Inventory)

Listed on AICS (Australian Inventory of Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

#### 15.3. US State regulations

MASTER BRAKE CLEANER NON-CHLORINATED 14 OZ.()				
State or local regulations		U.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
Acetone (67-64-1)	Acetone (67-64-1)			
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
Yes				

#### Toluene (108-88-3)

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

#### Acetone (67-64-1)

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

Benzene 71-43-2

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

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## **SECTION 16: Other information**

Indication of changes : Revision - See : \*.

Other information : NFPA Aerosol Level 3. None.

Full text of H-phrases: see section 16:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Asp. Tox. 1	Aspiration hazard Category 1
Compressed gas	Gases under pressure Compressed gas
Flam. Aerosol 2	Flammable aerosol Category 2
Flam. Liq. 2	Flammable liquids Category 2
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H223	Flammable aerosol
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H301	Toxic if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H315	Causes skin irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H361	Suspected of damaging fertility or the unborn child
H370	Causes damage to organs
H373	May cause damage to organs through prolonged or repeated exposure

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt

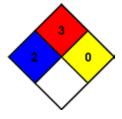
medical attention is given.

NFPA fire hazard : 3 - Liquids and solids that can be ignited under almost all

ambient conditions.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions,

and are not reactive with water.



#### **HMIS III Rating**

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard
Physical : 1 Slight Hazard

SDS US (GHS HazCom 2012)

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

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